

DIVISION OF GEOLOGICAL SURVEY AND WATER RESOURCES

BUHLER PARK      ROLLA MISSOURI 65401      314-364-1752

WILLIAM C. HAYES    STATE GEOLOGIST AND DIRECTOR

WALLACE B. HOWE    ASSISTANT STATE GEOLOGIST

June 29, 1971

Barth D. Morgan  
Production Superintendent  
Hoffman-Taff, Incorporated  
Verona, Missouri 65769

*Spdx Verona*  
*Nodes 7452/51*  
*1.3*  
*Mo Division 33*  
*6-29-71*  
*0751*

Dear Ron:

I talked to Mr. Coffey of your Springfield office, about the procedures and results of the dye test. Mr. Coffey suggested placing another charcoal packet further upstream from the plant to get an additional background count on natural fluorescence present in the river. I suggest that it be placed by the bridge upstream from the plant where the road, south of the plant, crosses over the river.

The following are fluorometer readings that were obtained from the charcoal bags placed in the river.

May 19, 1971 - Dye placed in Hoffman-Taff lagoon; packets placed in Spring Creek.

May 25, 1971 - Packets picked up.

May 27, 1971 - Packets tested for dye trace under fluorometer.

Fluorometer readings are 0-100

10X  
Packet 1    50  
Packet 2    96  
Packet 3    52  
Packet 4    42

June 10, 1971 - Hoffman-Taff lagoon redyed.

June 22, 1971 - Packets picked up.

June 23, 1971 - Packets tested.



40030397  
SUPERFUND RECORDS

	1X	3X	10X	30X	Remarks
Packet 1	85	Off Scale	Off Scale	Off Scale	
Packet 2	Off Scale	" "	" "	" "	
Packet 3	" "	" "	" "	" "	
Packet 4	" "	" "	" "	" "	

Ronald D. Riggs  
June 29, 1971  
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	1X	3X	10X	30X	Remarks
Clear					
Spring 5 44		Off Scale	Off Scale	Off Scale	On Erwin Farm
Polluted					
Spring 6 Off Scale	"	"	"	"	" " "

The readings are comparison readings and have no unit value.

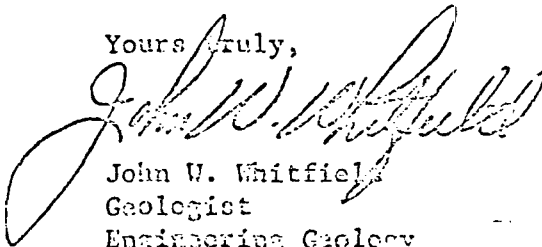
After the charcoal packets are removed from the river, they are placed in paper envelopes and returned to the laboratory in Rolla. The packets are opened and a portion of them poured into a glass beaker, then a reagent frees the fluorescene from the charcoal so that it can be tested. If the dye concentration is heavy enough, a green color can be seen in the fluid. No traces of dye could be seen by visual examination on packets obtained from Spring Creek. Studies of dye tracing indicate that about .1 part per million is visible to the naked eye if the water is clear, if the water is discolored due to organic or other impurities in the water, the dye color can be masked so that it cannot be detected by the eye. A sample of the fluid is poured out of the beaker into a small test tube which is placed in the fluorometer. Readings are then taken at various powers. These powers range from 1X, 3X, 10X, and 30X. The above readings show which power was used to determine the presence of fluorescene.

If Hoffman-Taff would care to do their own testing, you may be interested in where we obtain our supplies. Fluorescene dye is obtained from Tyland Products Co., 95-10 218th Street, Queens Village, New York 11429. Cost is \$4.00 per pound. It is an organic commercial grade dye. The charcoal is activated coconut, 6-14 mesh, 5-685B. We got 4 pound cans from, Fisher Scientific Company, Chemical Manufacturing Division, Fair Lawn, New Jersey. The reagent used to abstract the dye from the charcoal is 5% KOH in a 95% grain alcohol solution.

I would suggest that you not place any dye into the lagoons until I have completed my test.

I will be down that way again, possibly the 7th or 8th of July, to pick up the charcoal bags in the creek.

Yours truly,



John W. Whitfield  
Geologist  
Engineering Geology

JWW/lb  
Enclosures

cc: James Gdendahl  
Missouri Water Pollution Board  
Jefferson City, Missouri

☐ - CHARCOAL PACKETS PLACED IN SPRING CREEK May 17, 1971

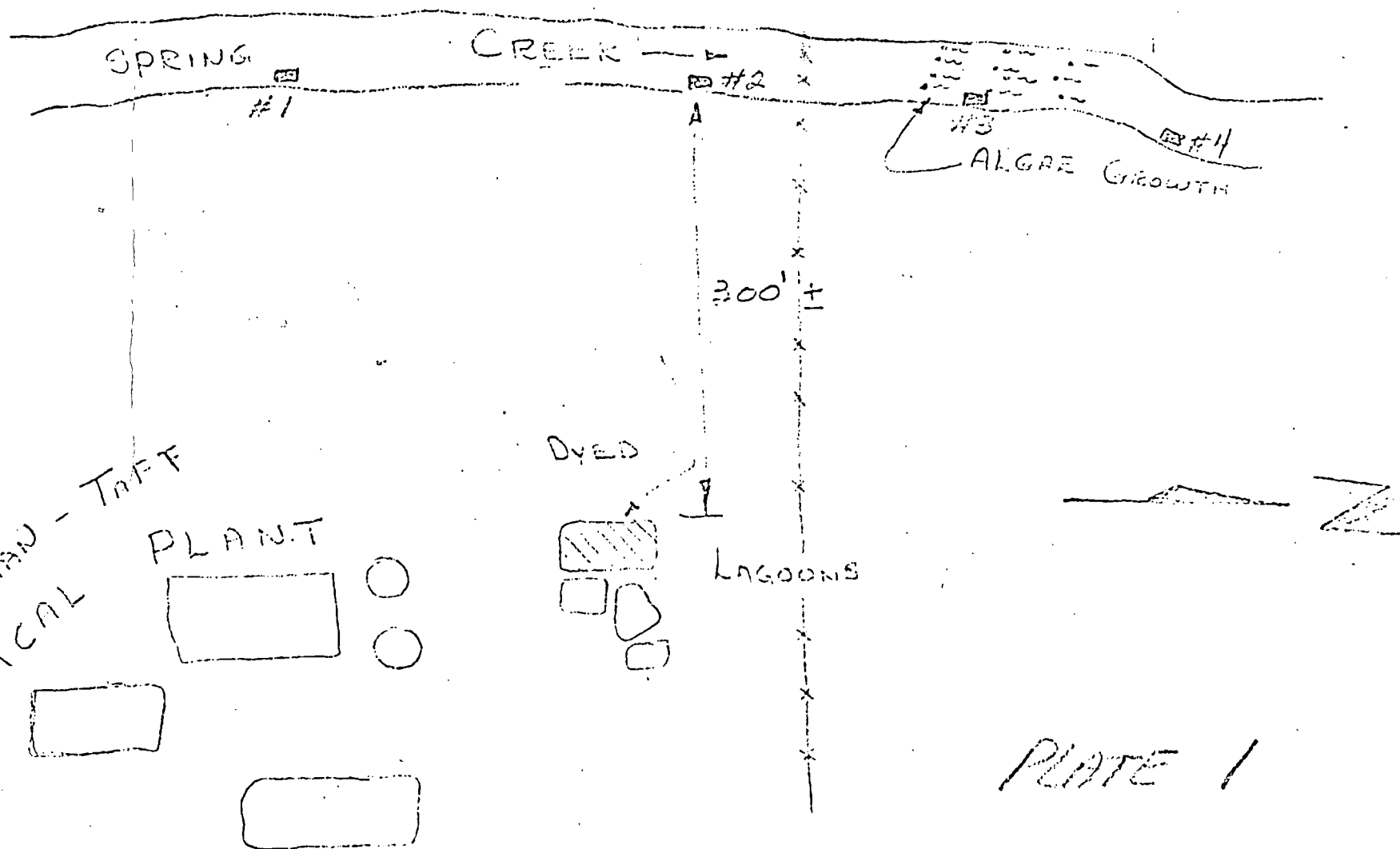


PLATE 1

VERONA

☐ - CHARCOAL PACKETS PLACED IN SPRING CREEK JUNE 10, 1971  
 #5 & #6 PLACED IN SPRINGS ON IRWIN PROPERTY

